

# INFLUENCE OF CARRYING MATERIALS, HANDLING VOLUMES AND TRANSPORT, ON THE PHYSICAL DAMAGE OF PLUCKED TEA LEAVES

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This study was carried out to identify the effect of type of carrying materials, volume/density and duration of transport on plucked fresh green leaves. Three types of carrying materials as coir gunny bags, modified poly bags and plastic boxes; two types of green leaf densities as 16 kg and 20 kg, were considered. Time duration that the green leaves spent in carrying material were measured as another variable. There were two main sources; St. Joachim Estate and bought-leaf-lines, associated with St. Joachim factory. Green leaf samples were collected randomly at the collecting points. One sample was selected initially from each collecting point of the respective line, picked from the bulk leaf that go into plastic containers, gunny bags and modified poly bags. Packed green leaves were transported to the factory without any load on top, in the same place of the lorry each day. Time spent to transport was recorded. One bulk sample (around 2 kg) each was selected, from withering troughs just after unloading the respective green leaves. Small green leaf samples of approximately 300 g were drawn from the selected bulk green leaf lots using the quadrant method. This final sample was assessed manually and worked out the percentages of good, damaged and coarse leaves. Data were subjected to analysis of covariance and the mean separation using least significant difference test with SAS software, considering (0.05) probability value. There was a nearly significant ( $p=0.0638$ ) influence of time duration on the fresh leaf quality. Plastic box was better ( $p=0.0486$ ) than other two containers. The two densities/volumes considered (16 & 20 kg) have not produced a significant difference ( $p=0.3441$ ) on leaf quality in any of the containers. Therefore, taking these trends positively, the trial needs to be expanded to include more uniform starting material.

**Keywords:** Carrying materials, Leaf densities, Tea leaves, Transport